

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Economics
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FARM LABOR RESEARCH

(Prepared by Raymond C. Smith, Assistant Chief, Farm Population, for the Gulfport BAE Conference, August 12-16, 1946)

Farm labor is an important factor in agricultural production and its cost makes up a substantial portion of total production costs. The members of the farm work force, whether they be farm operators, unpaid family workers, hired year-round workers, or local or migratory hired seasonal workers, are all human beings who are confronted with many problems. Because the BAE is concerned both with efficient production and with the welfare of farm people it carries on work in the field of farm labor. It contemplates giving increased attention to both research and statistical work in this field.

Although the Bureau's future farm labor research program has not been finally determined, we can discuss current thinking as to what such a program should include, and it is expected that members of this conference will make helpful suggestions. (A temporary committee is being established to consider suggestions and make recommendations as to just what should comprise a comprehensive and well balanced program in this field.)

While it is difficult and perhaps unnecessary to distinguish sharply between statistical work and research in this field, it is recognized that most of the collection of sample data and the making of estimates, particularly work of a regularly recurring nature, will be accomplished by the Division of Special Farm Statistics, while most of the research will be carried on by the Division of Farm Management and Costs and the Division of Farm Population and Rural Welfare. Since this session of the conference is concerned primarily with the Bureau's research program, this discussion, in the main, will pertain to the work of the latter two divisions.

Phases of the work handled by each of these two divisions will be discussed separately. It should be kept in mind, however, that the Bureau's farm labor work is a joint enterprise involving the closest cooperation not only between the research divisions involved but also between them and Agricultural Estimates, particularly the Division of Special Farm Statistics.

Work in the Division of Farm Management and Costs

Changes in farm man-hour requirements and in productivity of workers directly affect farm production efficiency and costs, and the ability of agriculture to provide gainful employment for its workers. Production per farm worker has increased by nearly 50 percent since World War I. Although good weather during the last few years played an important part in increasing production, technological developments have been largely responsible for the great increase in farm worker productivity.

In order to keep abreast of and analyze such developments as they occur, the Division of Farm Management and Costs will require the collection of more adequate statistics on labor requirements and productivity. The Division will cooperate with the Division of Special Farm Statistics in studying methods and procedures for refining and expanding basic labor requirements data, and in finding the most practical means of using enumerative survey and mail questionnaire techniques alone and in combination for gathering basic labor requirements statistics. Attention also will be given to the best means of utilizing data from secondary sources, such as State Experiment Station reports, federal and State farm practice and mechanization surveys, and current crop and livestock production estimates. Expansion of man-hour requirements data in the detail and geographic coverage desired is a big job and means must be devised to utilize fully all information bearing on the subject. Methods for conversion of man-hour requirements into number of workers needed on farms in specific areas, regions, and the nation as a whole should be developed in order to facilitate comparison of labor supply and labor requirements.

The analytical research of the Division in the field of farm labor will continue to emphasize work in labor requirements and labor productivity. Comprehensive measures of labor requirements for crop and livestock enterprises in terms of output per unit of work have already been developed for the United States covering the period 1910 to date, and for major geographic divisions and States for the years 1939 and 1944. In the future these data and additional data to be collected will be utilized in further study of the relationships between labor requirements and mechanization and other technological developments. Emphasis will be given to greater geographic detail which will permit analysis of labor requirements by type-of-farming areas.

Research will be undertaken to analyze the effects of different types of mechanical equipment and of various farm practices on man-hour requirements and number of workers needed in agriculture, by type of farming areas. This will involve a comparison of more advanced and newer ways of doing specific farm jobs with prevailing technology.

Analysis of the major factors associated with historical changes in man-hour requirements and labor productivity will be continued. Indexes of production per worker have been developed for each census geographic division from 1919 to date. Similar work, by States, will be started in the near future. In a comprehensive study of farm mechanization which is almost completed factors associated with the downward trend in farm labor requirements in the United States as a whole have been analyzed. Work

will soon be under way on analyses of the State labor requirements data for 1939 and 1944. These analyses will emphasize the relationship of mechanization and other technological developments to changes and variations in farm labor requirements.

Major questions which still need additional attention in farm labor requirements research include reasons for geographic variations in labor productivity; the precise relation of man-hour requirements to number of farm workers needed; and the probable future impact on man-hour requirements and farm workers of important technological changes now on the horizon. Work will be undertaken on these problems as rapidly as resources permit.

Work in the Division of Farm Population and Rural Welfare

As in the case of the Division of Farm Management and Costs, the farm labor research in this division will be of two principal types, work in cooperation with the Division of Special Farm Statistics and in cooperation with the Bureau of the Census looking toward the development or improvement of statistical series, and analyses of data obtained from mail questionnaires and enumerative surveys made by Agricultural Estimates, from the Census, from field studies often carried on in cooperation with Land Grant Colleges, and from other sources. These analyses will be pointed toward discovering relationships, learning the meaning in statistical data, and where possible toward finding causation factors.

Research of the first mentioned type will include study of the results of using enumeration and mailed questionnaires in combination in employment and wage and wage rate surveys, of using new definitions, and of using enumerative data for national and regional totals while using data obtained from mail questionnaires for the breakdown by States, and study of possible methods of splicing old series with series developed on the new basis. It will also include continuing studies of definitions of agricultural employment used by the Bureau of the Census in the Census of Agriculture and in the Monthly Report on the Labor Force, and studies to provide for comparability between BAE employment series and data on employment obtained by the Census. Study might show, for example, that the common use of more precise definitions would be helpful in reconciling present differences. If resources permit, studies looking toward the development of series on volume and composition of unemployed and not-in-the-labor force groups of farm population will be undertaken so as to develop bases for direct indications of changes in that part of the farm labor

supply which is included in the farm population. In selected areas work also will be done, if resources permit, to develop techniques for producing series on the movements of migratory farm workers.

The principal analytical projects contemplated by the division will have to do largely with the supply of farm labor; family and hired, its characteristics, and factors which affect its volume, terms of employment, and living and working conditions.

Studies will be made of the size, composition (as to age, sex, and tenure groups such as operators, unpaid family workers, hired year-round workers, and hired local and migratory seasonal workers), distribution and changes in the farm working force. By using data from enumerative surveys on employment, farms and farm workers will be differentiated according to distinctive patterns of labor utilization. Since the farm labor force contains many persons not included in the farm population the Bureau should continue to cooperate with the Bureau of the Census in securing information about those farm workers who are not a part of the farm population.

The structure of agricultural wage rates and wage differentials will be analyzed by regions, by type of farming areas, by type of work done, by duration of employment, by type of workers (age, sex, regular, and local or migratory seasonal), by methods of wage payment such as daily, weekly, monthly, and piece-rate, and in relation to perquisites.

Analyses will be made of income, employment, tenure, and occupational conditions of farm workers. The degree to which farm workers depend on agriculture and upon other sources for income will be determined if possible. Also the rewards for human labor in agriculture as compared to other occupations will be appraised. Occupational and tenure mobility, that is movements up or down the "agricultural ladder" and in and out of agricultural employment will be studied if resources permit. To the extent that tenure and income classifications can be used in level and standard of living analyses, information will be obtained on the living conditions of different types of farm workers.

Information obtained by the Bureau on both the demand and supply side of farm labor proved useful during the war. If the Bureau obtains more information on the requirements for farm labor in terms of prevailing production practices and improved techniques and on the changes in productivity per worker and at the same time learns more about the farm labor supply, in terms of volume and of characteristics of the workers, including their income and levels of living, it should be in still

better position to answer the many questions that will be raised in the next few years when we may see many changes in agriculture. Consider, for example, the possible future developments in mechanization. What will be the effects of the size of the farm work force upon the rate of mechanization? What will be the effects of mechanization on the size of the farm work force and how many in the present work force may no longer be needed and be forced to seek other employment? What will be the effects of mechanization upon the cost of production and the income of those who remain in agriculture? As a result of its farm labor statistical and research program, the Bureau will be in position to help answer such questions and to provide information to the farm people involved and to policy makers and others who will be devising the means to meet such problems.

